



# Advantage

inert gas fire suppression systems



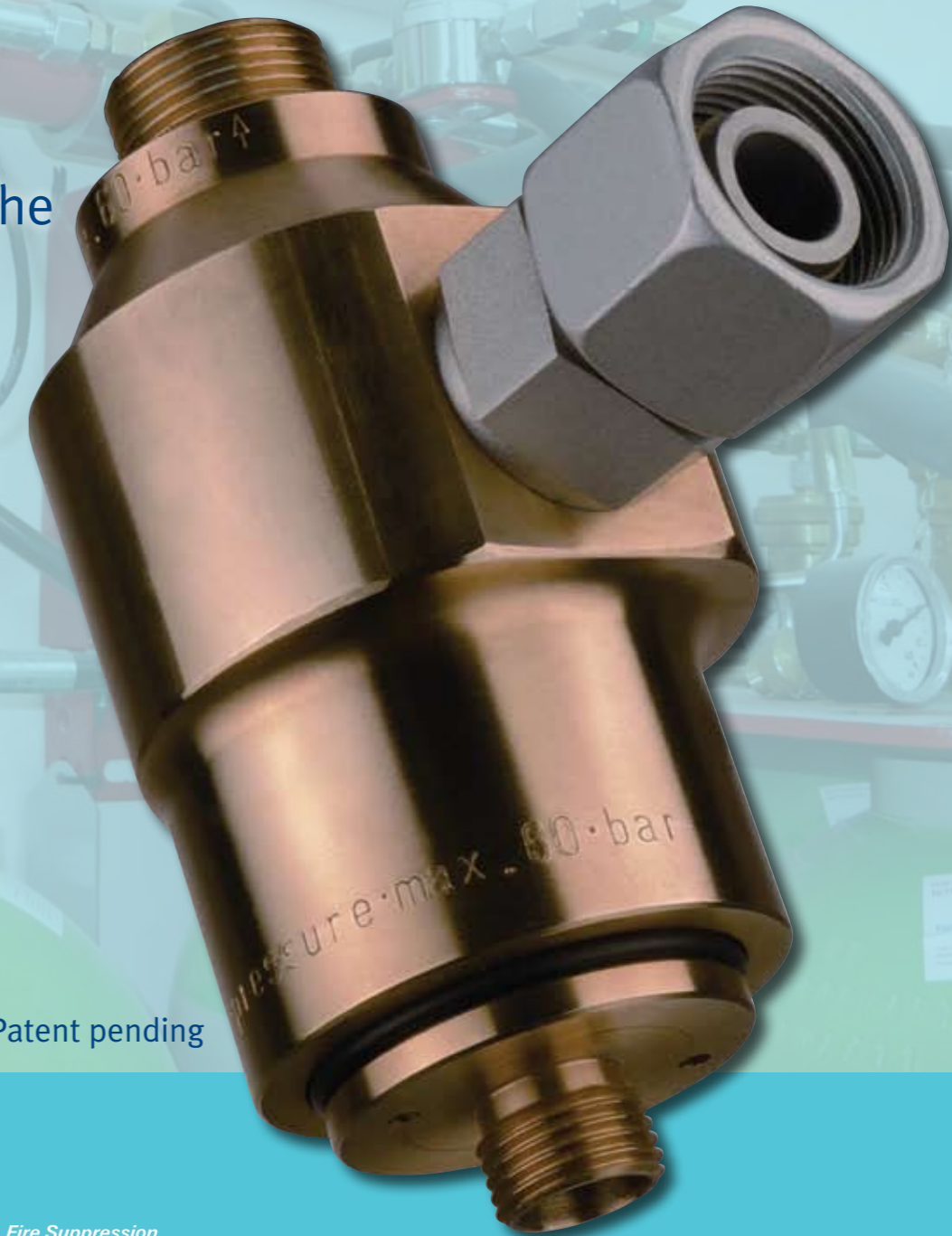
# Advantage



## i3™ inert gas

Inert gas fire suppression systems with the *Advantage* of constant flow technology

Patent pending



**tyco** Fire Suppression & Building Products

Hygood Fire Suppression Systems are manufactured by:  
**Tyco Fire Suppression & Building Products**

Burlingham House, Hewett Road  
Gapton Hall Industrial Estate  
Great Yarmouth  
Norfolk NR31 0NN, UK  
Tel +44 (0)1493 417600  
Fax +44 (0)1493 417700  
e-mail: [hygood-info@tyco-bspd.com](mailto:hygood-info@tyco-bspd.com)  
[www.hygood.co.uk](http://www.hygood.co.uk)

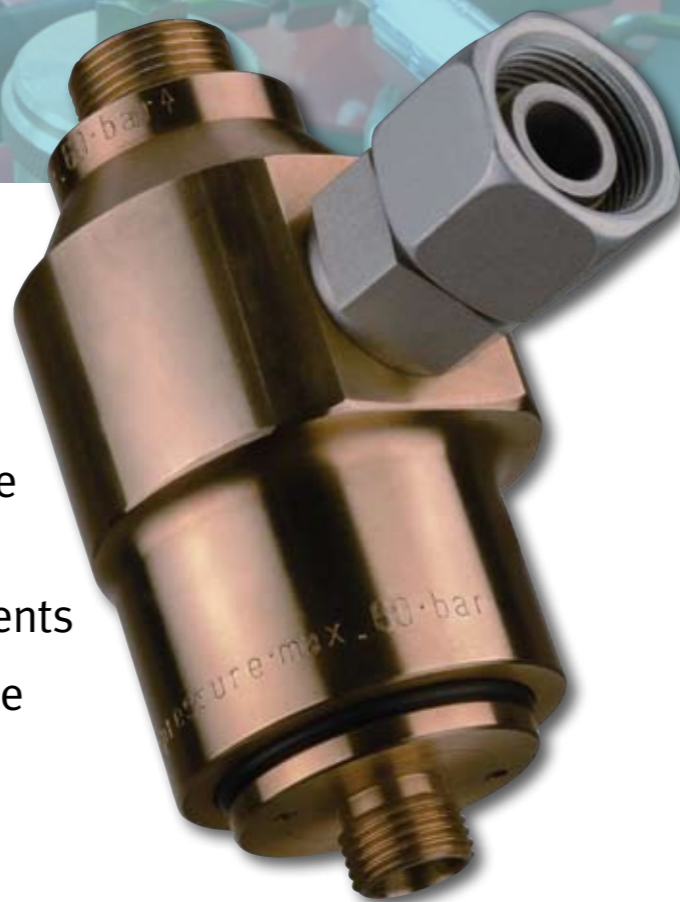
Hygood and i3 Advantage are trademarks of Tyco International and/or its affiliates.  
© Tyco International. 09/08.



**tyco** Fire Suppression & Building Products

## Inert gas fire suppression systems with the *Advantage* of constant flow technology

- Eliminates need for high pressure pipe work
- Reduced room venting requirements
- Reduces internal room turbulence on discharge
- Lower installation costs



### System overview

i3 Advantage is an inert gas total flooding fire suppression solution designed to protect spaces enclosing high value assets and processes. i3 Advantage systems use Hygood's patented Constant Flow Technology for dramatically improved performance, and reduced protected room pressure.

### What is constant flow, why is it a uniquely better solution?

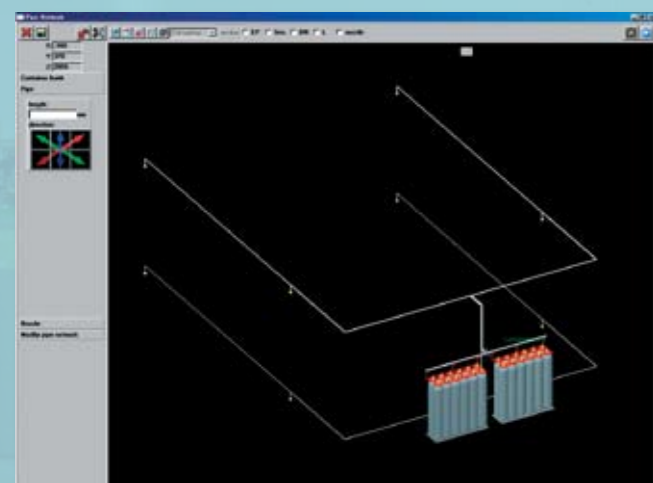
i3 Advantage systems have unique valve technology which, for the first time, works to smooth out the gas discharge. We call this 'constant flow' technology. The discharge graph below compares the pressure curves for both standard discharge systems and an i3 Advantage system to illustrate the benefits. The standard system displays a pressure 'spike' on discharge, normal for most inert gas systems. Although these systems meet the requirements of ISO14520 and EN15004 our engineers recognised that a more even discharge could offer real benefits for installers and users alike: this is illustrated in the second curve on the graph. In this discharge the constant flow technology eliminates the pressure spike and delivers a lower pressure into

the pipework system, furthermore the constant (reduced) flow into the protected enclosure, lowers the over pressurisation effect, reducing the size of the over pressurisation venting required in the enclosure.

### The installation

An i3 Advantage system uses cylinders filled with compressed i3 gas. In a fire situation the gas is discharged into the protected space to achieve a specific discharge time and concentration, both of which are calculated using the i3 Advantage design software, an easy to use application design package.

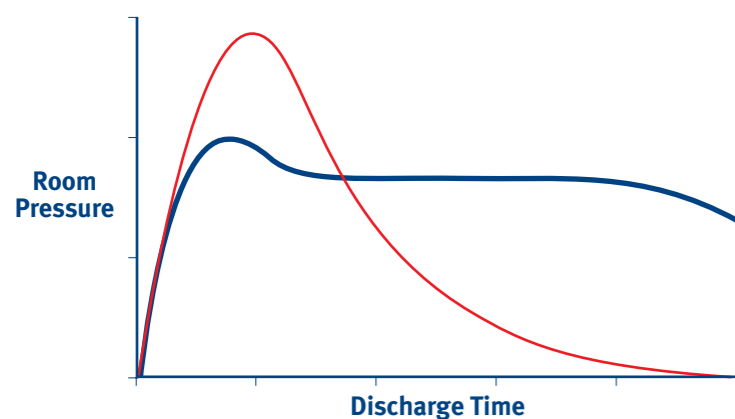
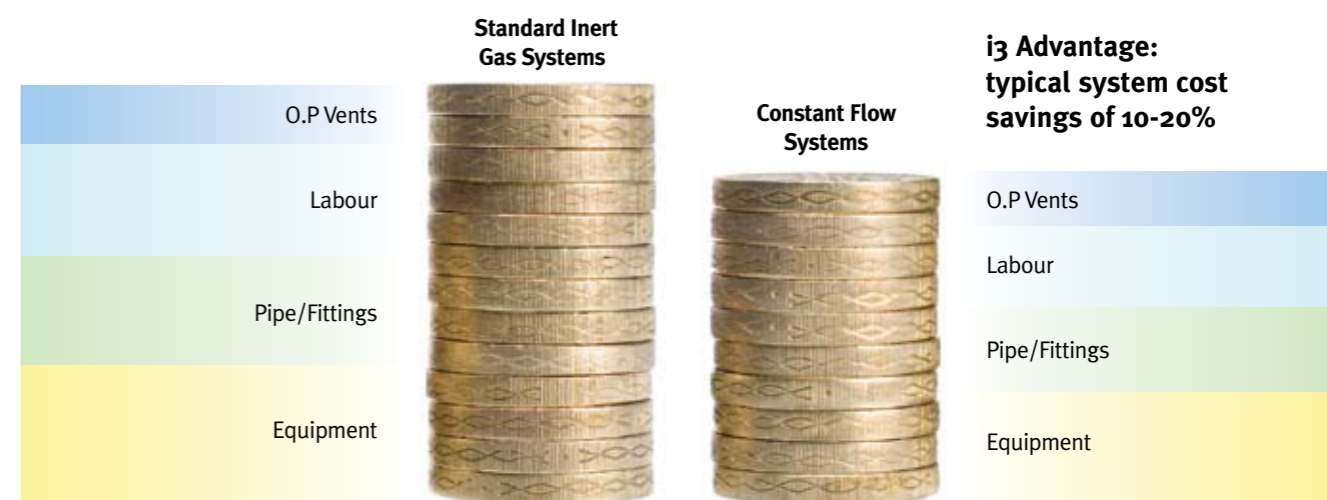
- System design using the flow calculation software ensures the system is designed in accordance with ISO14520 & EN15004: Gaseous Fire Extinguishing Systems.
- i3 gas is stored in 80 litre cylinders at 300 Bars. The cylinders are designed to meet the requirements of TPED (Transportable Pressure Equipment Directive).
- Typical applications include data and communications centres, as well as special risk niche installations.



i3 Advantage software is a Windows based system designed for easy use and simple operation. The software package is designed for engineers as a fast and accurate room protection design solution. The simple navigation menus allow site survey information to be entered for a fast calculation. The software package can show tabulated concentration and oxygen levels in the protected area as well as being able to generate a complete bill of system installation materials for system designers.

Once an installation has been created a complete set of system design drawings can be generated in isometric, plan and/or elevation form. The files are made available in PDF format for printing or emailing.

### i3 Advantage - typical cost savings



### Constant Flow Technology Explained

**Curve A** shows a standard high pressure inert gas system discharge, with its distinctive peak discharge: this excess pressure requires higher specification pipework and adequate over pressure venting to keep room pressures to acceptable levels.

Compare this with **Curve B** which shows the same discharge process. The peak pressure is eliminated and a more even flow is achieved during the entire effective discharge period. This is the i3 Advantage, working to provide a superior fire suppression solution.



### Efficient and rapid

An i3™ Inert Gas Fire Protection System is effective against virtually all combustible materials and flammable liquid fires and is an ideal choice in situations where an environmentally acceptable agent is required.